United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N	WA0001902	140612	C	R	3

Remarks

21 ____ 66

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	BI	QA	Reserved
67 10 69	70	71	72	73 74 75 ____ 80

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*

Leavenworth National Fish Hatchery
12790 Fish Hatchery Road
Leavenworth, WA 98826

Entry Time/Date	Permit Effective Date
9:45am / 6/12/14	1/30/1975
Exit Time/Date	**Permit Expiration Date**
12:45pm / 6/12/14	8/31/1979

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

Steve Croci, Acting Manager, Leavenworth National Fish Hatchery
phone: 509-548-7641
email: Steve_croci@fws.gov

Other Facility Data *(e.g., SIC NAICS, and other descriptive information)*

SIC: 0921
NAICS: 112511

Name, Address of Responsible Official/Title/Phone and Fax Number

Steve Croci, Acting Manager, Leavenworth National Fish Hatchery
12790 Fish Hatchery Road, Leavenworth, WA 98826
phone: 509-548-7641, email: Steve_croci@fws.gov

Contacted ☑ Yes ☐ No

Section C: Areas Evaluated During Inspection *(Check only those areas evaluated)*

✓ Permit	✓ Self-Monitoring Program	☐ Pretreatment	☐ MS4
✓ **Records/Reports**	☐ Compliance Schedules	☐ Pollution Prevention	
✓ Facility Site Review	☐ Laboratory	☐ Storm Water	
✓ Effluent/Receiving Waters	✓ Operations & Maintenance	☐ Combined Sewer Overflow	
✓ Flow Measurement	☐ Sludge Handling/Disposal	☐ Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)

SEV Codes SEV Description

RECEIVED
JUN 26 2014
Inspection & Enforcement Management Unit (IEMU)

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
Matt Vojik	EPA/OCE 206-553-0716	6/26/14
Signature of Management Q A Reviewer	Agency/Office/Phone and Fax Numbers	Date
Kimberly A. Ogle	EPA/OCE/IEMU 30955	1/21/15

EPA Form 3560-3 (Rev 1-06) Previous editions are obsolete.

ICIS.
6-26-2014
JJ Brown

INSTRUCTIONS

Section A: National Data System Coding *(i.e., PCS)*

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be *new* unless there is an error in the data entered.

Columns 3-11: NPDES Permit No. Enter the facility's NPDES permit number - third character in permit number indicates permit type for U=unpermitted, G=general permit, etc.. *(Use the Remarks columns to record the State permit number, if necessary.)*

Columns 12-17: Inspection Date. Insert the date entry was made into the facility. Use the year/month/day format (e.g., 04/10/01 = October 01, 2004).

Column 18: Inspection Type*. Use one of the codes listed below to describe the type of inspection:

A	Performance Audit	U	IU Inspection with Pretreatment Audit	!	Pretreatment Compliance (Oversight)
B	Compliance Biomonitoring	X	Toxics Inspection	@	Follow-up (enforcement)
C	Compliance Evaluation (non-sampling)	Z	Sludge - Biosolids	{	Storm Water-Construction-Sampling
D	Diagnostic	#	Combined Sewer Overflow-Sampling	}	Storm Water-Construction-Non-Sampling
F	Pretreatment (Follow-up)	$	Combined Sewer Overflow-Non-Sampling	:	Storm Water-Non-Construction-Sampling
G	Pretreatment (Audit)	+	Sanitary Sewer Overflow-Sampling	~	Storm Water-Non-Construction-Non-Sampling
I	Industrial User (IU) Inspection	&	Sanitary Sewer Overflow-Non-Sampling	<	Storm Water-MS4-Sampling
J	Complaints	\	CAFO-Sampling	-	Storm Water-MS4-Non-Sampling
M	Multimedia	=	CAFO-Non-Sampling	>	Storm Water-MS4-Audit
N	Spill	2	IU Sampling Inspection		
O	Compliance Evaluation (Oversight)	3	IU Non-Sampling Inspection		
P	Pretreatment Compliance Inspection	4	IU Toxics Inspection		
R	Reconnaissance	5	IU Sampling Inspection with Pretreatment		
S	Compliance Sampling	6	IU Non-Sampling Inspection with Pretreatment		
		7	IU Toxics with Pretreatment		

Column 19: Inspector Code. Use one of the codes listed below to describe the *lead agency* in the inspection.

A — State (Contractor)
B ---- EPA (Contractor)
E — Corps of Engineers
J — Joint EPA/State Inspectors—EPA Lead
L ---- Local Health Department (State)
N — NEIC Inspectors
O— Other Inspectors, Federal/EPA (Specify in Remarks columns)
P— Other Inspectors, State (Specify in Remarks columns)
R — EPA Regional Inspector
S — State Inspector
T — Joint State/EPA Inspectors—State lead

Column 20: Facility Type. Use one of the codes below to describe the facility.

1 — Municipal. Publicly Owned Treatment Works (POTWs) with 1987 Standard Industrial Code (SIC) 4952.
2 — Industrial. Other than municipal, agricultural, and Federal facilities.
3 — Agricultural. Facilities classified with 1987 SIC 0111 to 0971.
4 — Federal. Facilities identified as Federal by the EPA Regional Office.
5 — Oil & Gas. Facilities classified with 1987 SIC 1311 to 1389.

Columns 21-66: Remarks. These columns are reserved for remarks at the discretion of the Region.

Columns 67-69: Inspection Work Days. Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort of all participating inspectors; any effort for laboratory analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed documentation.

Column 70: Facility Evaluation Rating. Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information. Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection. Enter Q if the inspection was conducted as followup on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory except for "Other Facility Data," which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, other updates to the record, SIC/NAICS Codes, Latitude/Longitude).

Section C: Areas Evaluated During Inspection

Check only those areas evaluated by marking the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary, in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

*Footnote: In addition to the inspection types listed above under column 18, a state may continue to use the following wet weather and CAFO inspection types until the state is brought into ICIS-NPDES: K: CAFO, V: SSO, Y: CSO, W: Storm Water 9: MS4. States may also use the new wet weather, CAFO and MS4 inspections types shown in column 18 of this form. The EPA regions are required to use the new wet weather, CAFO, and MS4 inspection types for inspections with an inspection date (DTIN) on or after July 1, 2005.

NPDES Inspection Report

Permit # WA0001902

Leavenworth National Fish Hatchery

Leavenworth, WA

June 12, 2014

Prepared by:

Matt Vojik
Environmental Protection Agency, Region 10
Office of Compliance and Enforcement
Inspection and Enforcement Management Unit

Contents

I. Facility Information

Facility Name:	Leavenworth National Fish Hatchery
Facility Owner/Operator:	United States Department of the Interior Fish and Wildlife Service
Facility/Mailing Address:	12790 Fish Hatchery Road, Leavenworth, WA 98826
Lat/Long:	47.558889°, -120.672222°
NAICS Code:	112511
NPDES Permit:	WA0001902
Facility Contacts:	Steve Croci, Acting Manager Leavenworth National Fish Hatchery 12790 Fish Hatchery Road Leavenworth, WA 98826 Phone: 509-548-7641 Email: Steve_croci@fws.gov

(Unless otherwise noted, all details in this inspection report were obtained from conversations with Steve Croci or from observations during the inspection.)

II. Inspection Information

Inspection Date:	June 12, 2014
Inspectors:	Matt Vojik, Inspector EPA Region 10, OCE / IEMU 206-553-0716
Arrival Time:	6/12/2014, 9:45AM
Departure Time:	6/12/2014, 12:45PM
Weather:	Sunny
Purpose:	To determine compliance with the NPDES permit and the Clean Water Act (CWA).

III. Permit Information

This facility is currently permitted under NPDES permit WA0001902. The permit became

effective on January 30, 1975 and has been administratively extended since the expiration date of August 31, 1979. A draft permit was released for public comment on December 22, 2010, but this draft was not finalized due to public concerns and litigation. The facility submitted a new NPDES permit application on October 24, 2011. Prior to the inspection, I met with Lindsay Guzzo in the NPDES Permits Unit (NPU) to verify the status of the permit. The NPU did not have a projected timeline for the issuance of a new permit.

The facility was last inspected by the EPA on September 18, 2001.

IV. Background

The hatchery was constructed in 1939 and was placed on the National Registry of Historic Places in 1988. The hatchery was developed as a fish mitigation facility for the construction of the Grand Coulee Dam and falls under the tribal trust responsibilities of the U.S. Fish and Wildlife Service (USFWS). The facility is also the subject of a law suit filed on December 7, 2010 by the Wild Fish Conservancy, which has expressed concerns about the hatchery's impact on native bull trout populations.

The water supply for the hatchery is obtained from Icicle Creek, Snow Lake and seven groundwater wells. An upstream diversion in Icicle Creek routes most of the stream flow to the hatchery through an underground pipe. During low-flow summer and fall months, additional water is obtained from Snow Lake, which is located upstream of the intake structure. Four of the groundwater wells draw from a shallow aquifer, which is influenced by the amount of flow in the hatchery channel. During periods of low flow, the facility diverts additional flow from Icicle Creek to the hatchery channel to help recharge these groundwater wells.

In the most recent permit application, the facility has proposed to discharge to the hatchery channel to help to recharge the four shallow groundwater wells. The proposed outfall is identified as "Outfall #6" on the site map that appears in **Attachment A**. According to Mr. Croci, the USFWS was in the process of collecting water quality data to submit to the Washington Department of Ecology (Ecology) for review. Ecology is expected to use this data to evaluate the proposed outfall's potential impacts on groundwater quality as part of the state water quality certification process for the new NPDES permit.

The hatchery produces approximately 1.2 million spring Chinook salmon per year. The hatchery also provides facilities for part of the Yakama Nation's Coho Reintroduction Project, which releases approximately 500,000 coho salmon per year from the hatchery to Icicle Creek.

V. Inspection Entry

This was an unannounced inspection. I arrived at the facility at 9:45am on June 12, 2014. I greeted the receptionist and asked to speak to the facility manager. She said that Mr. Steve Croci was in a meeting, so I waited until 10:00am when he became available. At 10:00am, I presented my credentials to Mr. Croci and explained the purpose of my visit.

I was accompanied throughout the inspection by facility representatives. I was not denied access to the facility.

VI. Inspection Chronology

We began the inspection with an opening conference in the main office. We discussed the scope of the inspection and I conducted a records review and took a tour of the facility. We ended with a closing conference to discuss observations and next steps.

VII. Owner and Operator Information

The facility is owned and operated by the United States Department of the Interior, Fish and Wildlife Service.

VIII. Records Review

I conducted a review of the following records:

- **Discharge Monitoring Reports (DMRs)** – Prior to the inspection, I conducted a cursory review of the DMRs and the calculation spreadsheets that the facility attaches to its DMRs. During the inspection, I also conducted a cursory review of the DMR files at the facility. I did not note any problems with the DMRs before or during the inspection. After the inspection, I noted that the DMRs did not include monitoring results for one discharge limitation, which is further discussed under "Areas of Concern."

- **Analytical Records** – During the inspection, I conducted a cursory review of analytical records and did not identify any areas of concern. A copy of example analytical records from May 2014 appears in **Attachment D**.

- **Monitoring Instructions** – During the inspection, I asked whether the facility followed standard procedures for sampling and analysis and Mr. Croci presented a binder of instructions. I conducted a cursory review of the binder and made a copy of the instructions, which appears in **Attachment C**.

IX. Facility Inspection

Mr. Croci took me on a tour of the facility. A facility site map appears in **Attachment A** and a photograph log appears in **Attachment B**.

I inspected the pollution abatement ponds (**Photo 1**). According to Mr. Croci, the newer of these two ponds was constructed in 2010. He also explained that these ponds discharge to Outfall #2 (**Photo 2**) at a rate of approximately 0.5 cubic feet per second (cfs) during regular operations and four cfs during cleaning events.

In this vicinity, I also inspected Outfall #4, which is no longer in use. Mr. Croci said that this outfall was last used four or five years ago, but it could be used again in the event of an emergency. In lieu of Outfall #4, Mr. Croci explained that the facility uses Outfall #5, which consists of a temporary 4-inch flex hose used to release fish for a few weeks each year around the middle of April.

I inspected the fish ladder, which flows continuously to Outfall #1, according to Mr. Croci.

Upstream of the spillway, I also inspected Outfall #3 (**Photo 3**), which consisted of a dry bypass ditch from the screen chambers. Mr. Croci explained that this bypass is not in use, but Outfall #3 could potentially be considered as an alternate to Outfall #6, which has been proposed under the latest NPDES permit application as described in **Section IV.** of this report.

I also inspected the intake structure located upstream of the facility along Icicle Creek (**Photo 4**).

I also asked if the facility was equipped with a back-up generator. Mr. Croci explained that the facility was in the process of replacing the back-up generator, which broke a few months ago.

I also asked about the usage of chemicals and pharmaceuticals at the facility. Mr. Croci explained that the facility uses formalin, hydrogen peroxide and salt to treat wounds and parasites in fish. Aquamycin® is used as a fish antibiotic. Virkon® and iodine are used as disinfectants.

X. Receiving Water

The receiving water is Icicle Creek.

XI. Observed Discharge

During the inspection I observed flow from the fish ladder at Outfall #1. I also observed flow from the pollution abatement ponds at Outfall #2 (**Photo 2**). The locations of these outfalls are indicated on the site map in **Attachment A**.

XII. Sampling and Analyses

The facility monitors Outfall #1, Outfall #2 (**Photo 2**) and influent from Icicle Creek at the intake structure (**Photo 4**). Samples are delivered to Cascade Analytical for analysis. A copy of the facility's monitoring instructions appears in **Attachment C**.

EPA inspectors did not collect samples at the time of the inspection.

XIII. Areas of Concern

I noted the following area of concern:

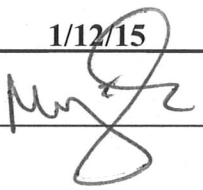
A. Reporting Requirements for Suspended Solids Concentration
Section A.2.a. of the permit specifies monitoring requirements and discharge limitations that include an instantaneous maximum of 15mg/L over the intake concentration for suspended solids in total (non-cleaning) discharge.
AND
Section C.2. states that "monitoring results shall be summarized each month on a Discharge Monitoring Report."

After the inspection, I noted that the facility's DMRs do not include the instantaneous maximum concentration for suspended solids in total (non-cleaning) discharge.

XIV. Closing Conference

I held a closing conference with Mr. Croci and gave a brief overview of the post-inspection process. I thanked him for his time and assistance with the inspection.

Report Completion Date: 1/12/15

Lead Inspector Signature: 

ATTACHMENT A – Site Map and Water Supply Schematic

Form 1: X1. map (1) LNFH

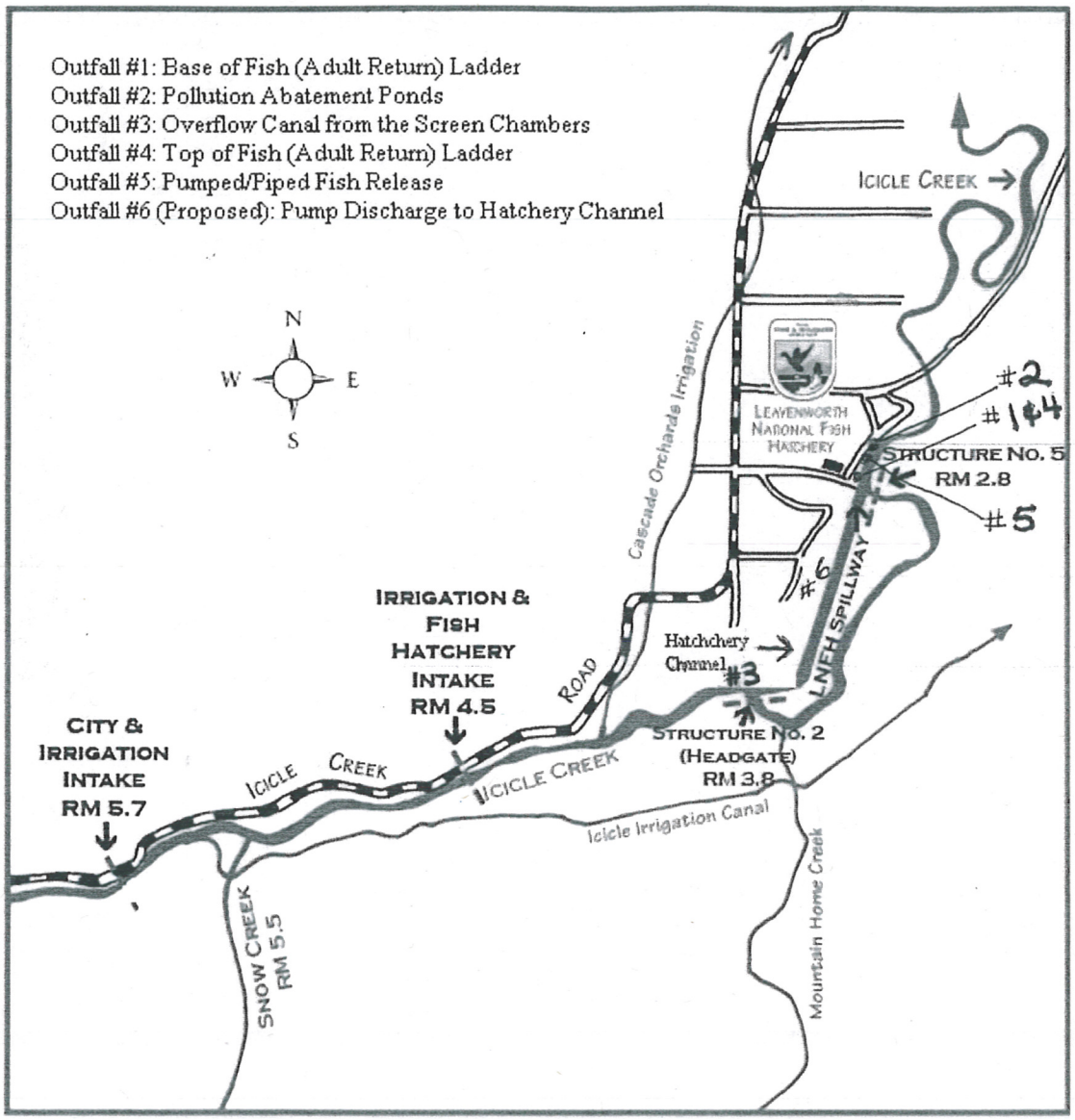
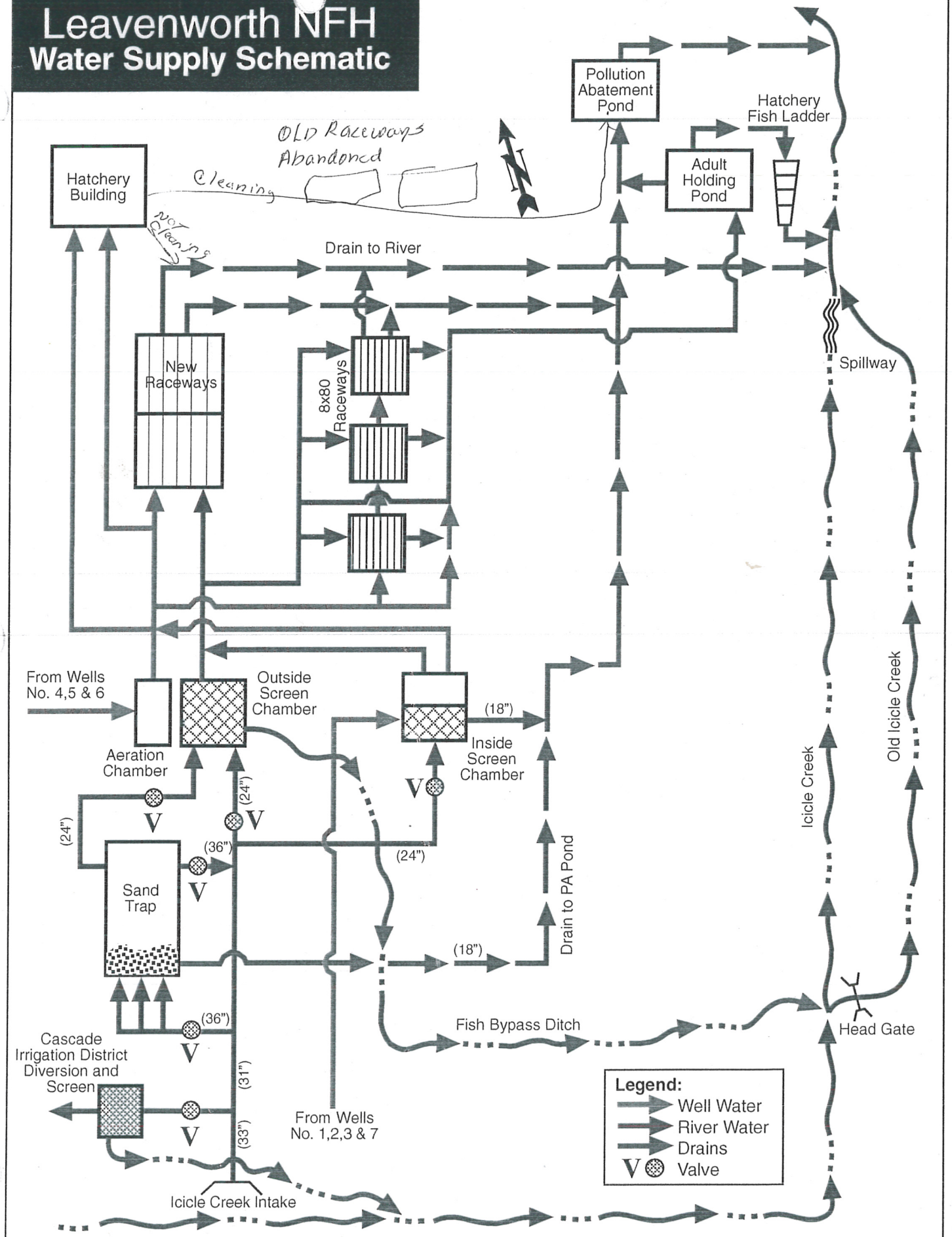


Figure 1. Leavenworth National Fish Hatchery and Vicinity

ATT I

Leavenworth NFH
Water Supply Schematic



Note: Only valves located on river water pipe lines to which downstream migrating fish are exposed are shown.

Figure 3.3

ATTACHMENT B – Photograph Log

Leavenworth National Fish Hatchery – WA0001902
Photographs Taken by Matt Vojik
June 12, 2014

Photo 1 / P1010407 – Northeasterly view of the new pollution abatement pond, which is located next to the old pollution abatement pond. The edge of the old pollution abatement pond is visible on the right side of this photograph.

Photo 2 / P1010412 – Southeasterly view of Icicle Creek. Outfall #2 appears in the foreground and the spillway dam, identified as "Structure No. 5" on the site map, appears in the upper right corner. The yellow arrow indicates the approximate location of Outfall #1.

Leavenworth National Fish Hatchery – WA0001902
Photographs Taken by Matt Vojik
June 12, 2014

Photo 3 / P1010418 – Southwesterly view of Outfall #3. The dam identified as "Structure No. 2" on the site map, appears in the background.

Photo 4 / P1010419 – View of the access to the intake structure. The intake channel runs along the bottom left corner of this photograph.

Leavenworth National Fish Hatchery – WA0001902
Photographs Taken by Matt Vojik
June 12, 2014

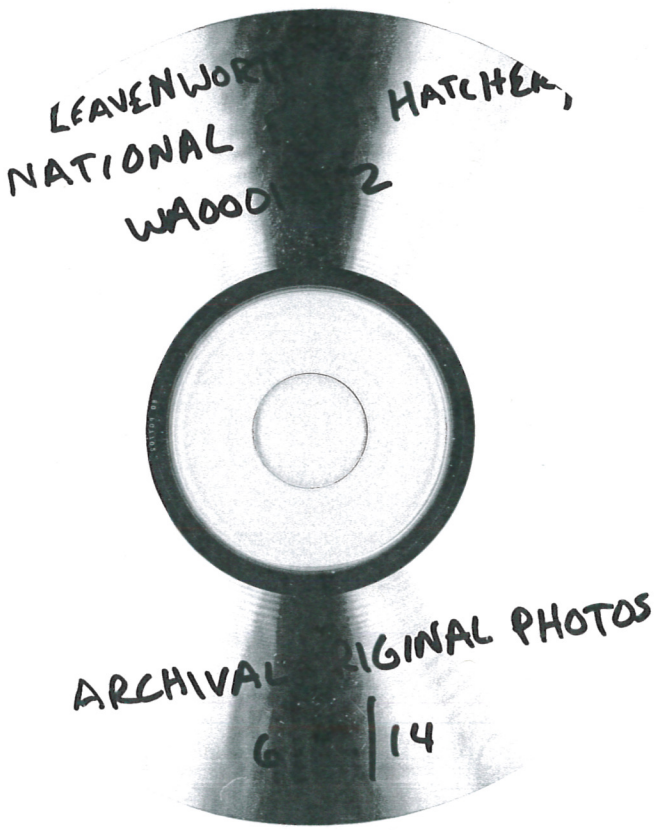
Description of additional photographs taken during the inspection:

- P1010408 – Southerly view of the old pollution abatement pond.
- P1010409 – Vegetated pile of material removed from the pollution abatement ponds over a year ago.
- P1010410 – Southerly view of the spillway dam, identified as "Structure No. 5" on the site map.
- P1010411 – Detail view of Outfall #2 from the pollution abatement ponds.
- P1010413 – Southerly view of the spillway dam. The wood platform in the center of the photograph is in the approximate location of Outfall #5.
- P1010414 – View of Outfall #4, which is no longer in use.
- P1010415 – Northerly view of the fish ladder, which leads to Outfall #1.
- P1010416 – Westerly view of the raceways.
- P1010417 – Southerly view of Dam #2, identified as "Structure No. 2" on the site map.
- P1010420 – Easterly view of the intake channel.
- P1010421 – View of the intake valve.
- P1010422 – View of the Outside Screen Chamber.
- P1010423 – View of the sand trap.
- P1010424 – View of the sand trap.
- P1010425 – Northerly view of the raceways.

Leavenworth National Fish Hatchery – WA0001902
Photographs Taken by Matt Vojik
June 12, 2014

CD of Original Photographs

Camera model: Panasonic DMC-FH25



ATTACHMENT C – Monitoring Instructions

INSTRUCTION TO COMPLETE MONTHLY AND QUARTERLY

NPDES PERMIT

There are three forms to fill out monthly.

1. The NPDES form 3320-1
2. Data sheet (one) an in-house form which contains 5 week of data and flows.
3. Data sheet (two) from Cascade Analytical

1. FLOW

Flows are calculated daily and data are taken from the daily Water Use Report.

a. Each week when samples are taken fill in the number of ponds in use and total flow in gpm's in the appropriate area on data sheet #2.
b. Data sheet #2 has a TOT FLOW in MG/D column. This is total flow in million gallons per day. Add up the total gpm from ponds in use, multiply the gpm's by 60 min/hour times 24 hours per day and divide by 1,000,000 to get MG/D, enter data in appropriate column on **Intake Icicle** line for that week.
c. DO NOT COUNT SECOND-USE WATER IN FLOW CALCULATIONS.
d. After a months of data is collected the average and maximum flows in MG/D are entered on data the NPDES form.

2. COMPOSITE SAMPLE (Suspended Solids)

Composite samples are taken **ONCE per month.**

a. A "composite sample" means a minimum of four grab samples collected not less than two hours apart during daylight hours.
b. The intake composite samples are taken from the intake. Mark bottles **Suspended Solids Composite.**

c. The second composite samples are **discharge samples**, one from end of the outside screen chamber canal just before the water mixes with Icicle Creek and the other from under the bridge by the trash rack a site with no back-water influence of Icicle Creek Make sure sample bottles are marked **Suspended Solids Composite.**

c. When data comes back from Cascade Analytical enter data in appropriate column on data sheet #1, calculate the net difference, and enter in the net. diff column.
d. Calculate the WASTE MG/D, multiply the (total GPM from ponds in use column) X (0.00545) X (the net difference), enter in appropriate column on data sheet #1 and NPDES sheet.

GPM x 60 x 24 = MG/D

Million gallon/day calculation - WASTE KG/D

18,900 x 0.00545 x 0.6 = 61.8

NET DIFF

GPM x 0.00545 x NET DIFF =

3. **SETTLEABLE SOLIDS**

Two times per month samples are taken from the Intake and both discharge areas; the screen chamber canal and under the bridge. All are grab samples ~~each~~ are measured individually. Again make sure sample bottles are labeled Setteable solid.

e. Cascade Analytical will provide data for entry on data sheet #1. This sample will be taken the second and forth week of the month.

f. Add the two discharge samples together and subtract the sample from the intake sample to get the IN & DIS DIF and record in column in data sheet #2. Values are in ml/l.

g. At the end of the month, average the two data entries and record on the NPDES form.

4. **SUSPENDED SOLIDS CLEANING EFFLUENT**

a. Take samples **twice per month** during representative periods of raceway cleaning from the PA pond effluent prior to discharge to the receiving waters. . Subtract the PA pond suspended solid amount from the intake suspended **Composite** sample to get the net difference. Enter all three values on data sheet #1.

b. After both samples are taken for the month, enter the Minimum, Average, and Maximum values on NPDES form 3320-1. Note Maximum should not exceed 15ML/L.

5. **SETTLEABLE SOLIDS CLEANING EFFLUENT**

a. Settleable solids samples are taken **once** per week during representative periods of raceway cleaning from the PA pond effluent prior to discharge to the receiving waters.

b. After all samples are processed enter Minimum, Average and Maximum values on NPDES form 3320-1. Note Maximum value should not exceed 0.2.

CASCADE ANALYTICAL, INC.

3019 G. S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888
Fax: (509) 662-8183
1-800-545-4206

1008 W. Ahtanum Rd.
Union Gap, WA 98903
(509) 452-7707
Fax: (509) 452-7773

WATER ANALYSIS ORDER FORM

Batch#	SAMPLE # 1	2	3	4	5
SEND RESULTS TO 1) Client 2) Billing 3) Both					
SAMPLE REPRESENTS 1) Irrigation 2) Waste Water 3) Other					
SAMPLE BY 1) Client 2) Quality Control 3) Cascade 4) Other					

New Acct. #

CLIENT NAME/ADDRESS
LEAVENWORTH NFH
12790 FISH HATCHERY RD
LEAVENWORTH, WA 98826
SAMPLER'S NAME
~~SHAUN~~ TRAVIS COLLIER

BILLING NAME/ADDRESS
← SAME

PHONE
548-7641

E-mail _____ E-mail _____

RELINQUISHED BY: (Signature) 1	DATE	RELINQUISHED BY: (Signature) 2	DATE	RELINQUISHED BY: (Signature) 3	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED FOR LAB BY: (Signature)	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME

SAMPLE

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

	1	INTAKE ICICLE - SETTLEABLE	Sample Date 6/20/12 Sample Time 0700
	2	PA POND DISCHARGE - SETTLEABLE "DURING CLEANING"	Sample Date 6/20/12 Sample Time 0715
	3	UNDER BRIDGE DISCHARGE - SETTLEABLE	Sample Date 6/20/12 Sample Time 0720
	4	INTAKE ICICLE - TSS	Sample Date 6/20/12 Sample Time 0700
	5	PA POND DISCHARGE - TSS "DURING CLEANING"	Sample Date 6/20/12 Sample Time 0715

*METALS - indicate type of analysis - T=total, D=dissolved

Total N package = TKN, NO_3, NO_2, NH_3

Sample container received by client was sealed Yes ✓ No_____

Sample container received by laboratory was sealed Yes_____ No_____

[redacted]al, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability [redacted]scade's test results. Cascade neither assumes nor authorizes any person to assume for Cascade any [redacted]nection with the testing done by Cascade Analytical, Inc., and there are no other oral agreements or [redacted]l to or affecting this agreement.

[redacted]cal Inc.'s liability to customer as a result of customers use of Cascade's test results shall be limited to a [redacted]es paid by customer to Cascade Analytical, Inc. for the testing work.

SIGN Signature: _____ Date 6/20/12

This form also serves as "Chain of Custody."

(see legend on back) SAMPLE #

	IRRIGATION WATER	1	2	3	4	5
	Standard					
	GENERAL CHEMISTRY					
1135	pH					
1140	Conductivity					
1200	Solids-Dis. (TDS)					
1230	Solids-Susp. (TSS)					
1240	Tot. Phosphorus					
1250	Orthophosphate					
1260	Kjeldahl Nitrogen (TKN)					
1170	Nitrate+Nitrite					
1265	NO (As N)					
1280	Ammonia					
1300	Biol. Oxy. Demand					
1310	Chem. Oxy. Demand					
1190	Sulfate (SO_4)					
1180	Chloride (Cl)					
7110	TOC					
1320	Hexane Ext. Mat.					
1340	Alkalinity					
217	Total N Pkg					
	MICROBIOLOGY					
10040	Total Coliform MF					
10010	Fecal Coliform MF					
10041	Total Coliform MPN					
10011	Fecal Coliform MPN					
	METALS - TOTAL OR DISSOLVED					
	Priority Pollutants					
1391	Antimony (Sb)					
1011	Arsenic (As)					
1025	Barium (Ba)					
1405	Beryllium (Be)					
1031	Cadmium (Cd)					
1045	Chromium (Cr)					
1215	Copper (Cu)					
1065	Iron (Fe)					
1075	Manganese (Mn)					
1081	Mercury (Hg)					
1051	Lead (Pb)					
1335	Nickel (Ni)					
1091	Selenium (Se)					
1105	Silver (Ag)					
1381	Thallium (Tl)					
1225	Zinc (Zn)					
	MINERALS					
1120	Calcium (Ca)					
1130	Magnesium (Mg)					
1115	Potassium (K)					
1110	Sodium (Na)					

ATTACHMENT D – Example Analytical Records from May 2014

CASCADE ANALYTICAL, INC.
1-800-545-4206

(509) 662-1888
Fax: (509) 662-8183
3019 G. S. Center Road
Wenatchee, WA 98801

(509) 452-7707
Fax: (509) 452-7773
1008 W. Ahtanum Rd
Union Gap, WA 98903

RECEIVED
Leavenworth

Batch: 494123
Client: Leavenworth NFH Complex
Account: 01507
Sampler: Chris Foster
PO Number:

--- Water Analytical Report ---

Report Date: 5/ 7/14

Leavenworth NFH Complex
Chris Foster
12790 Hatchery Rd
Leavenworth, WA 98826

Laboratory Number: 14-E008421
Sample Identification: Intake Icicle
Sample Comment: Composite

Date Received: 5/ 1/14
Date Sampled: 5/ 1/14

Test Requested	Results	Units	RL	Method	Date Analyzed	Flags
Total Suspended Solids	2.5	mg/l	1.0	SM 2540-D	5/ 5/14	

Approved By Name: [signature]
Function: LAB SUPERVISOR

Signature: [signature]

Cascade Analytical uses procedures established by EPA, AOAC, APHA, ASTM, and FDA/BAM. Cascade Analytical makes no warranty of any kind the client assumes all risk and liability from the use of these results. Cascade Analytical, Inc.'s liability to the client as a result of use of Cascade's test results shall be limited to a sum equal to the fees paid by the client to Cascade Analytical, Inc. for analysis. PLEASE REVIEW YOUR DATA IN A TIMELY MANNER. DATA GAPS OR ERRORS AFTER THREE MONTHS WILL NOT BE OUR RESPONSIBILITY. THOUGH WE DO KEEP ALL ANALYTICAL DATA FOR SEVERAL YEARS, SAMPLES ARE DISPOSED OF AFTER SIX WEEKS.

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Batch: 494123
Client: Leavenworth NFH Complex
Account: 01507
Sampler: Chris Foster
PO Number:

--- Water Analytical Report ---

Report Date: 5/ 7/14

Leavenworth NFH Complex
Chris Foster
12790 Hatchery Rd
Leavenworth, WA 98826

Laboratory Number: 14-E008422
Sample Identification: Intake Icicle
Sample Comment:

Date Received: 5/ 1/14
Date Sampled: 5/ 1/14

Test Requested	Results	Units	RL	Method	Date Analyzed	Flags
Total Settleable Solids	< 0.1	ml/L		SM 2540 F	5/ 1/14	

Approved By Name: [signature]
Function: LAB Supervisor

Signature: [signature]

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CASCADE ANALYTICAL, INC.
1-800-545-4206

Batch: 494123
Client: Leavenworth NFH Complex
Account: 01507
Sampler: Chris Foster
PO Number:

--- Water Analytical Report ---

Report Date: 5/ 7/14

Leavenworth NFH Complex
Chris Foster
12790 Hatchery Rd
Leavenworth, WA 98826

Laboratory Number: 14-E008423 Date Received: 5/ 1/14
Sample Identification: Under Bridge Discharge Date Sampled: 5/ 1/14
Sample Comment: Composite

Test Requested	Results	Units	RL	Method	Date Analyzed	Flags
Total Suspended Solids	2.4	mg/l	1.0	SM 2540-D	5/ 5/14	

Approved By Name: [signature]
Function: LAB SUPERVISOR

Signature: [signature]

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Union Gap, WA 98903

Batch: 494123
Client: Leavenworth NFH Complex
Account: 01507
Sampler: Chris Foster
PO Number:

--- Water Analytical Report ---

Report Date: 5/ 7/14

Leavenworth NFH Complex
Chris Foster
12790 Hatchery Rd
Leavenworth, WA 98826

Laboratory Number: 14-E008424
Sample Identification: PA Pond Discharge
Sample Comment:

Date Received: 5/ 1/14
Date Sampled: 5/ 1/14

Test Requested	Results	Units	RL	Method	Date Analyzed	Flags
Total Settleable Solids	< 0.1	ml/L		SM 2540 F	5/ 1/14	

Approved By Name: Tracy Barnes
Function: LAB Supervisor
Signature: Tracy Barnes

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WATER ANALYSIS ORDER FORM

Batch#	SAMPLE # 1	2	3	4	5
SEND RESULTS TO 1) Client 2) Billing 3) Both					
SAMPLE REPRESENTS 1) Irrigation 2) Waste Water 3) Other					
SAMPLE BY 1) Client 2) Quality Control 3) Cascade 4) Other					

New Acct. #

CLIENT NAME/ADDRESS
Leavenworth NFH
12790 Fish Hatchery RD
Leavenworth WA 98826
SAMPLER'S NAME
Chris Foster

BILLING NAME/ADDRESS
← Same

PHONE
548-2930

E-mail _____ E-mail _____

RELINQUISHED BY: (Signature) 1	DATE	RELINQUISHED BY: (Signature) 2	DATE	RELINQUISHED BY: (Signature) 3	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED FOR LAB BY: (Signature)	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

1	Intake Icicle - TSS composite	Sample Date	5-1-14
		Sample Time	0800
2	Intake Icicle - Settleable	Sample Date	5-1-14
		Sample Time	0800
3	Under Bridge discharge - TSS Composite	Sample Date	5-1-14
		Sample Time	0815
4	PA Pond Discharge - Settleable	Sample Date	5-1-14
		Sample Time	0820
5		Sample Date	
		Sample Time	

*METALS - circle type of analysis - T=total or D=dissolved
Total N package = TKN, NO_3, NO_2, NH_3
Sample container received by client was sealed Yes X No_____
Sample container received by laboratory was sealed Yes_____ No_____

Disclaimer:
Cascade Analytical, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability from the use of Cascade's test results. Cascade neither assumes nor authorizes any person to assume for Cascade any other liability in connection with the testing done by Cascade Analytical, Inc., and there are no other oral agreements or warranties collateral to or affecting this agreement.
Cascade Analytical Inc.'s liability to customer as a result of customers use of Cascade's test results shall be limited to a sum equal to the fees paid by customer to Cascade Analytical, Inc. for the testing work.

Customer Signature: Chris Foster Date 5-1-14

This form also serves as "Chain of Custody."

CAICOF - 03 REV. 04/26/2013

(see legend on back)

	IRRIGATION WATER	SAMPLE # 1	2	3	4	5
	Standard					
	GENERAL CHEMISTRY					
1135	pH					
1140	Conductivity					
1200	Solids-Dis. (TDS)					
1230	Solids-Susp. (TSS)					
1240	Tot. Phosphorus					
1250	Orthophosphate					
1260	Kjeldahl Nitrogen (TKN)					
1170	Nitrate+Nitrite					
1265	NO_3 (As N)					
1280	Ammonia					
1300	Biol. Oxy. Demand					
1310	Chem. Oxy. Demand					
1190	Sulfate (SO4)					
1180	Chloride (Cl)					
1150	Turbidity					
1320	Hexane Ext. Mat.					
1340	Alkalinity					
217	Total N Pkg					
	MICROBIOLOGY					
10040	Total Coliform MF					
10010	Fecal Coliform MF					
10041	Total Coliform MPN					
10011	Fecal Coliform MPN					
	METALS - TOTAL OR DISSOLVED					
1391	Antimony (Sb)					
1011	Arsenic (As)					
1025	Barium (Ba)					
1405	Beryllium (Be)					
1031	Cadmium (Cd)					
1045	Chromium (Cr)					
1215	Copper (Cu)					
1065	Iron (Fe)					
1075	Manganese (Mn)					
1081	Mercury (Hg)					
1435	Molybdenum (Mo)					
1051	Lead (Pb)					
1335	Nickel (Ni)					
1091	Selenium (Se)					
1105	Silver (Ag)					
1381	Thallium (Tl)					
1225	Zinc (Zn)					
	MINERALS					
1120	Calcium (Ca)					
1130	Magnesium (Mg)					
1115	Potassium (K)					
1110	Sodium (Na)					

CASCADE ANALYTICAL, INC

Sample Receipt Form

Date Received: 5/01/14 Time Received: 3:45 Initials: RO

Client Name: Leavenworth NFH Project Name: _____

Temperature of cooler upon receipt: 11 °C Thermometer ID: #2

Custody seals: (Intact) Broken None N/A

Chain of Custody Completed:

Client name, address, and phone number;	(Yes)	No
Date and time of sampling;	(Yes)	No
Test requests clear;	(Yes)	No
Completed in ink;	(Yes)	No
Signed by client;	(Yes)	No

All samples received:		(Yes)	No
All samples intact:		(Yes)	No
Sample ID's match COC form:		(Yes)	No
Appropriate containers used:		(Yes)	No
Sufficient amount of sample for analysis:		(Yes)	No
Correct preservative verified:	(N/A)	Yes	No
Air bubbles in VOC, TTHM, or HAA5 samples:	(N/A)	Yes	No
Sample(s) exceed hold time:		Yes	(No)

Type of coolant: Ice Blue Ice (None) Other Comment: _____

Shipping Method: FedEx UPS USPS Brett & Sons (Hand Delivered) CAI Sampled

Shipping Container: CAI Cooler CAI Cooler Box Client's Cooler (None) Other _____

Samples accepted for analysis: (Yes) No

Reason for Rejection: _____

Name of Person Contacted: _____ Date Contacted: _____

Comments: _____